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A NEW NEOTENIC SALAMANDER FROM TEXAS.[1]

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On April 1, 1936, we collected in a small stream five miles north of Helotes, Texas, and took nine larval salamanders from among dead leaves in the deeper pools. These salamanders obviously belong in the genus Eurycea and in body form, color and pattern resemble *E. b. bislineata*. From *bislineata* they differ in having 16 costal grooves, and poorly developed dorsal light bands and dorso-lateral light areas. Although the gills are well developed in all individuals, and the tail, tongue, dentition and cranial characters are larval in character, the larger individuals of both sexes are sexually mature.

The structural features of generic significance which, in adults, easily separate Eurycea and Typhlotriton, are not sufficiently developed in the larvae to serve as criteria. However, the larvae from Texas may be distinguished from those of Typhlotriton by their color, pattern, smaller size, different costal groove count and shape of the tail fins. Typhlotriton larvae are more uniformly colored and attain a length of at least 97 mm. while the largest sexually mature male of the Texas salamander is only 72 mm., and the largest female, 69 mm. The costal grooves of Typhlotriton are 17 in the majority of specimens, counting one each in the axilla and groin, while in the Texas material the count is usually 16, but varies from 15 to 17. The tail fins of Typhlotriton are broad and the tip of the tail bluntly pointed; in the Eurycea here described, the fins are narrow and the tail tapers to a sharp point.

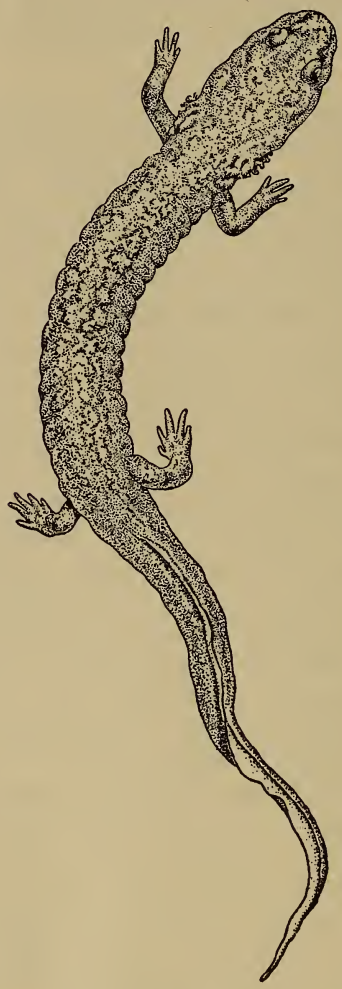
The genus Eurycea in Texas has heretofore been represented by *Eurycea* (*Manculus*) *q. quadridigitata* in the eastern part of the State and *Eurycea melanopleura* from an unknown

[1] Contribution from the Department of Zoology, University of Rochester.

locality. The former has only four toes and the latter 13 costal grooves. The characteristics given below will distinguish the new Texas species from other members of the genus Eurycea.

Eurycea neotenes, sp. nov.

This is a small, slender species attaining a maximum length, in this series of specimens, of 72 mm. Head moderately broad, widest immediately anterior to the gills; snout bluntly rounded; gills with long rami; costal



Eurycea neotemes, n. sp. Male, actual length 72 mm.
Drawn by Miss M. L. Leffler.

grooves 15–17; tail oval in section near base, somewhat flattened below, compressed distally; dorsal tail fin very narrow and extending from a point dorsal to the posterior end of vent to a sharp point at the tip of the tail; ventral tail fin equally narrow and extending less than half the length of the tail, continued a short distance further as a low ridge; toes 4–5, free; toes of fore feet in order of length, from the shortest, 1, 4, 2, 3; hind, 1, 5, 2, 4, 3. Vent of female a simple slit with a few low tubercles along the margins; that of the male with the margins thrown into folds.

In life the ground color is yellowish with the brown chromatophores aggregated on the back and sides to give a mottled appearance. There is only a slight indication of a light dorsal band, and the light dorso-lateral spots are only faintly developed. The secondary row of light larval areas is developed only on the smaller specimens. The sides of head and chin are lightly pigmented, and the dark line from eye to nostril is more prominently developed than in *E. b. bislineata*. The lower sides and belly are without pigment.

Holotype, male, 68 mm. long; allotype, female, 62 mm. long. Types deposited in the U. S. National Museum.

Type locality.—Culebra Creek, 5 miles north of Helotes, Bexar County, Texas. April 1, 1936. Nine specimens of both sexes.

Field notes.—The stream where the larvae were taken flows over bed rock at the foot of a wooded ridge. At the time of our visit, the water was shallow except in small pools which had a depth of 12–18 inches. The surrounding territory was exceedingly dry, and search along the borders of the stream and beneath logs and stones on the adjacent hillside failed to discover transformed individuals of this or any other salamander. It remains to be discovered if this salamander ever transforms.

Measurements and costal grooves are indicated below for the nine specimens.

	LENGTH IN MM.		COSTAL GROOVES	
SEX	TOTAL	TAIL	LEFT	RIGHT
male	68	32	16	16
male	72	33	16	16
male	66	31	16	15
male	53	24	16	16
female	62	29	15	16
female	69	32	17	16
female	68	31	16	16
female	61	27	16	15
young	39	16	15	15

The specimens upon which the above account is based were collected during a field trip made possible by a grant from the National Research Council.